

What is claimed is:

1. A voltage-controlled oscillator comprising:
 - a voltage-controlled oscillation circuit that oscillates at a frequency according to a control voltage; and
 - a limiter circuit that limits an output of the voltage-controlled oscillator to a predetermined level.
2. The voltage-controlled oscillator according to claim 1,
wherein the limiter circuit includes a differential amplifier circuit that receives the output of the voltage-controlled oscillation circuit and operates in a saturated state.
3. The voltage-controlled oscillator according to claim 2,
wherein the differential amplifier circuit operates from an operation current produced by a constant current source that produces a constant current by applying a predetermined voltage to a current producing resistor.
4. The voltage-controlled oscillator according to claim 3,
wherein the current producing resistor is a device of a same type as a load resistor of the differential amplifier, and is placed near the load resistor.
5. The voltage-controlled oscillator according to claim 3,
wherein the predetermined voltage is produced by a band-gap circuit.
6. The voltage-controlled oscillator according to claim 1,

wherein a supply power line to the voltage-controlled oscillation circuit and a supply power line to the limiter circuit are separate from each other.

7. A voltage-controlled oscillator comprising:

a plurality of voltage-controlled oscillation circuits that oscillate at a frequency according to a control voltage;

a selector circuit that selects one of the voltage-controlled oscillation circuits and makes the selected voltage-controlled oscillation circuit operate; and

a limiter circuit that limits an output of the selected voltage-controlled oscillation circuit to a predetermined level.

8. The voltage-controlled oscillator according to claim 7,

wherein the limiter circuit includes a differential amplifier circuit that receives the output of the voltage-controlled oscillation circuit and operates in a saturated state.

9. The voltage-controlled oscillator according to claim 8,

wherein the differential amplifier circuit operates from an operation current produced by a constant current source that produces a constant current by applying a predetermined voltage to a current producing resistor.

10. The voltage-controlled oscillator according to claim 9,

wherein the current producing resistor is a device of a same type as a load resistor of the differential amplifier, and is placed near the load resistor.

11. The voltage-controlled oscillator according to claim 9,

wherein the predetermined voltage is produced by a band-gap circuit.

12. The voltage-controlled oscillator according to claim 7,

wherein the limiter circuit is so placed that wiring conductors thereto from the individual voltage-controlled oscillation circuits are equally long.

13. The voltage-controlled oscillator according to claim 7,

wherein the limiter circuit is so placed that wiring conductors thereto from the individual voltage-controlled oscillation circuits are decreasingly long in order of decreasing output levels from the voltage-controlled oscillation circuits.

14. The voltage-controlled oscillator according to claim 7,

wherein a supply power line to the voltage-controlled oscillation circuits and a supply power line to the limiter circuit are separate from each other.

15. A voltage-controlled oscillator comprising:

a plurality of voltage-controlled oscillation circuits that oscillate at a frequency according to a control voltage; and

a selector circuit that selects one of the voltage-controlled oscillation circuits and makes the selected voltage-controlled oscillation circuit operate,

wherein variable oscillation frequency ranges of adjacent voltage-controlled oscillation circuits are so set as to overlap at ends thereof, and variable oscillation frequency ranges of the individual voltage-controlled oscillation circuits are so adjusted that an upper

end frequency of an n th (where $n \geq 1$) voltage-controlled oscillation circuit as observed when most deviated on a low side is higher than a lower end frequency of m th (where $m = n + 1$) voltage-controlled oscillation circuit as observed when most deviated on a high side.

16. An integrated circuit device comprising:

a voltage-controlled oscillator including a voltage-controlled oscillation circuit that oscillates at a frequency according to a control voltage and a limiter circuit that limits an output of the voltage-controlled oscillator to a predetermined level.

17. An integrated circuit device comprising:

a voltage-controlled oscillator including a plurality of voltage-controlled oscillation circuits that oscillate at a frequency according to a control voltage, a selector circuit that selects one of the voltage-controlled oscillation circuits and makes the selected voltage-controlled oscillation circuit operate, and a limiter circuit that limits an output of the selected voltage-controlled oscillation circuit to a predetermined level.

18. An integrated circuit device comprising:

a voltage-controlled oscillator comprising a plurality of voltage-controlled oscillation circuits that oscillate at a frequency according to a control voltage and a selector circuit that selects one of the voltage-controlled oscillation circuits and makes the selected voltage-controlled oscillation circuit operate,

wherein variable oscillation frequency ranges of adjacent voltage-controlled oscillation circuits are so set as to overlap at ends thereof, and variable oscillation frequency ranges of the individual voltage-controlled oscillation circuits are so adjusted that an upper

end frequency of an n th (where $n \geq 1$) voltage-controlled oscillation circuit as observed when most deviated on a low side is higher than a lower end frequency of an m th (where $m = n + 1$) voltage-controlled oscillation circuit as observed when most deviated on a high side.